

# Focus on Phosphorus (P) at catchment level in Sweden

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A pilot project was started in 2007 as part of the advisory campaign Focus on Nutrients. The aim is to involve farmers in finding the most effective countermeasures against phosphorus (P) losses and to test well-known countermeasures and new potential solutions. Three agricultural catchments with clay soils (470-750 ha) in southern and central Sweden are involved. In a local team, farmers, advisors and researchers discuss the topic on catchment scale. The farmers participate voluntarily and are not obliged to follow any recommendations arising from the project. Advice is given on fertilisation and nutrient balances, tillage practices, animal diet, livestock housing, manure containers and buffer strips along streams and wetlands.

Capture losses from the field for minimal damage



Till in spring – if you can!  
 Improve drainage  
 Avoid soil compaction  
 Avoid heavy rollers /tilth packers in autumn  
 Construct barrier zone around surface water inlets

In one catchment, ageing drainage systems and water ponding conditions in fields have been identified as major contributors to the problem and systematic advice on drainage has been given to all farmers. Several critical source areas (SCA) for P transport have been identified and temporal variations are treated as uncertainties within the spatial limits of these SCAs. Outside the project, farmers have tested reduced tillage and direct drilling in autumn to winter wheat and liming with sewage sludge or industrial lime products as potential countermeasures. They have also increased the length of buffer strips along streams despite subsidies for these having been reduced. Use of phosphorus fertilisers is decreasing (Figure 1).



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Fertiliser and manure P (kg ha<sup>-1</sup>)

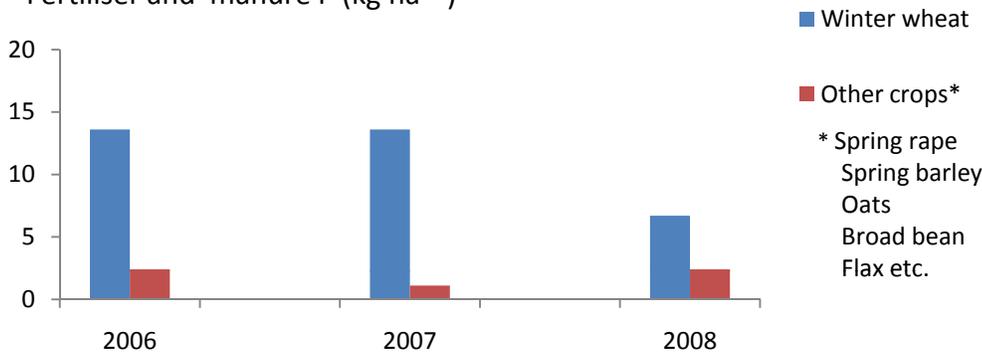


Figure 1. Winter wheat is cultivated on approx. half of the arable land area, usually one year after each other. Winter wheat receives the highest dose of P fertilisation but this has decreased.